



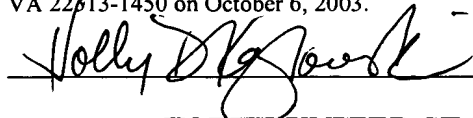
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IN THE UNITED STATES PATENT & TRADEMARK OFFICE

Applicant: Jiping WANG et al : Paper No.:
Serial No.: 09/784,489 : Group Art Unit: 1751
Filing Date: February 15, 2001 : Examiner: C. Boyer

For: **Method for the Application of Durable Press Finishes to Textile Components Via the Use of Hydrophobic Bleaching Preparation**

TRANSMITTAL OF APPEAL BRIEF

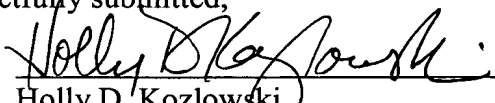
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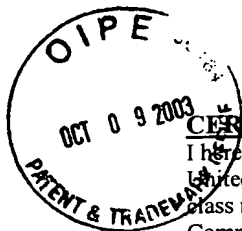
Dear Sir:

Submitted herewith in triplicate is an Appeal Brief in support of the Notice of Appeal filed by Certificate of Mail on July 31, 2003 and received by the U. S. Patent and Trademark Office on August 4, 2003. Please charge the \$330.00 Appeal fee to our Visa credit card. Form PTO-2038 is attached. Please charge any additional fees required in connection with this communication to Deposit Account No. 04-1133.

Respectfully submitted,

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Holly D. K. Jones

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APPEAL BRIEF

Mail Stop Appeal Brief - Patents
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P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

The present Appeal Brief is submitted in support of the Notice of Appeal filed by Certificate of Mail on July 31, 2003 and received by the U.S. Patent and Trademark Office on August 4, 2003.

I. REAL PARTY IN INTEREST

The real party in interest in this appeal is the assignee of the present application, The Procter & Gamble Company.

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II. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences known to the Appellants, the Appellants' undersigned legal representative or the assignee which are believed will directly effect or be directly effected by or having a bearing on the Board's decision in the present appeal. However, for the Board's information, it is noted that appeals are being pursued in copending applications Serial Nos. 09/784,541 and 09/784,677, which the Board may find of interest to the present appeal.

III. STATUS OF THE CLAIMS

Claims 1-25 are pending and stand rejected. A complete copy of the pending claims is set forth in the Appendix.

IV. STATUS OF AMENDMENT FILED SUBSEQUENT TO REJECTION ON APPEAL

No amendment was submitted to final rejection. A Request for Reconsideration was presented but did not contain any claim amendments.

V. SUMMARY OF THE INVENTION

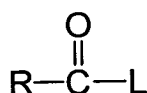
The present invention relates to the use of hydrophobic bleaching systems to prepare textiles for finishing and, more particularly, to the use of activated peroxide bleaching via hydrophobic activators or hydrophobic peracids to prepare woven or knitted fabrics, fibers or yarns for application of durable press as well as textiles produced therefrom (specification, page 1, lines 11-14).

According to independent claim 1, the invention is directed to a method for the treatment of a non-finished textile component. The method comprises the steps of providing a non-finished textile component, saturating said textile component with an aqueous

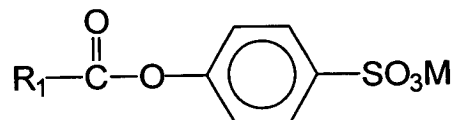
hydrophobic bleaching solution comprising hydrogen peroxide and a hydrophobic bleach activator or hydrophobic peracid, and allowing said bleaching solution to remain in contact with said textile component for a period of time sufficient to bleach said textile component followed by finishing said textile component to provide durable press to said textile component.

Claim 2 recites that in the method of claim 1, the step of providing durable press comprises treating the textile with a urea based crosslinking agent. According to claim 3, the urea based crosslinking agent is 1,3 dimethylol-4,5 dihydroxyethylene urea. According to claim 4, the step of providing durable press in claim 1 comprises treating the textile with an aqueous solution of formaldehyde, a catalyst capable of catalyzing a cross linking reaction with the textile and an effective amount of a silicone elastomer forming material, and curing said treated textile to provide durable press to said textile component.

Claim 5 recites that the bleaching solution of claim 1 comprises hydrogen peroxide and a hydrophobic bleach activator selected from a specified group. Claim 6 further specifies the hydrophobic bleach activator as selected from the general formula:



wherein R is an alkyl chain having from about 7 to about 12 carbon atoms and L is a leaving group, the conjugate acid of which has a pKa from about 4 to about 13. Claim 7 specifies the bleach activator as an alkanoyloxybenzenesulfonate of the formula:



wherein R₁ is an alkyl group having from about 8 to about 11 carbon atoms and M is a suitable cation.

According to claim 8, the bleaching solution of claim 1 further includes an ingredient selected from the group consisting of wetting agents, sequestering agents, stabilizing agents, desizing agents, scouring agents and mixtures thereof.

According to claim 9, the bleaching solution of claim 5 contains from about 1 to about 20 g/L of hydrogen peroxide. According to claim 10, the molar ratio of hydrophobic bleach activator to hydrogen peroxide in the bleaching solution of claim 5 ranges from about 1:1 to about 1:50.

Claim 11 recites that in the method of claim 1, the textile component remains in contact with said bleaching solution for from about 15 to about 180 minutes. Claim 12 recites that in the method of claim 11, the bleaching solution is at a temperature of from about 20 to about 90 °C. Claim 13 recites that in the method of claim 10, the bleaching solution is at a temperature of from about 50 to about 80 °C and said textile component remains in contact with said bleaching solution for from about 30 to about 60 minutes.

According to claim 14, the bleaching solution of claim 1 further comprises from about 0.5 to about 20 g/L of sodium hydroxide. According to claim 15, the ratio of the bleaching solution to said textile component in the method of claim 12 is from about 5:1 to about 100:1 in a batch process.

According to claim 16, the textile component in claim 1 experiences a fabric strength reduction of less than about 10% during said method. According to claim 17, the treated textile component of claim 14 experiences a fluidity increase of less than about 25%.

Claim 18 recites the further step of de-sizing said non-finished textile component prior to contact with said bleaching solution in the method of claim 1. Claim 19 recites the step of scouring said non-finished textile component prior to contact with said bleaching solution in the method of claim 1. Claim 20 recites the further step of de-sizing said non-

finished textile component prior to contact with said bleaching solution in the method of claim 19.

According to claim 21, the curing step in the method of claim 4 is a heat curing and is carried out at a temperature of from about 250°F to about 325°F. According to claim 22, the textile in the method of claim 4 is immersed in said treatment solution to provide a pick up, on weight of fabric, of at least about 3% formaldehyde, at least about 1% catalyst and at least 1% silicone elastomer forming material. According to claim 23, the catalyst in the method of claim 4 comprises magnesium chloride and citric acid.

Claims 24 and 25 are directed to a product produced by the process of claims 1 and 4, respectively.

VI. ISSUES ON APPEAL

The following issues are presented for review by the Board:

A. The rejection of claims 1 and 4-25 under 35 U.S.C. §103(a) as being unpatentable over the Willey et al published PCT application WO 94/28106 in view of the Payet U.S. Patent No. 5,885,303.

B. The rejection of claims 1-3, 5-21 and 24 under 35 U.S.C. §103(a) as being unpatentable over Willey et al in view of the Wright U.S. Patent No. 3,639,096.

VII. GROUPING OF THE CLAIMS

Appellants submit that:

A. With respect to the above noted issue A. on appeal, Appellants submit that claims 13, 14 and 16-20 are independently patentable from the claims from which they depend. Appellants admit that claims 4-12, 15, and 21-25 stand or fall together with the claims from which they depend.

B. With respect to the above noted issue B. on appeal, Appellants submit that claims 13, 14 and 16-20 are independently patentable from the claims from which they depend. Appellants admit that claims 2, 3, 5-12, 15, 21 and 24 stand or fall together with the claims from which they depend.

Reasons in support of the independent patentability of the respective claims are set forth below.

VIII. ARGUMENTS

The methods and products defined by claims 1-25 are nonobvious over and patentably distinguishable from the combination of Willey et al and Payet and from the combination of Willey et al and Wright. Accordingly, the rejections under 35 U.S.C. §103 should be reversed. Favorable action by the Board is respectfully requested.

A. The Invention

as defined by claim 1, the invention is directed to methods for treatment of a non-finished textile component. The methods comprise the steps of providing a non-finished textile component, saturating the textile component with an aqueous hydrophobic bleaching solution, and allowing the bleaching solution to remain in contact with the textile component for a period of time sufficient to bleach the textile component. The aqueous hydrophobic bleaching solution comprises hydrogen peroxide and a hydrophobic bleach activator or hydrophobic peracid. The method further comprises following the bleaching step by finishing the textile component to provide durable press to the textile component.

As set forth in the specification, for example at page 17, beginning at line 29, a non-finished textile component is a material that has not been dyed, printed or otherwise provided a finishing step such as durable press coatings. As further set forth in the specification, one of ordinary skill in the art will recognize therefore that the non-treated textile component

recited in claim 1 has not been passed through a garment or other manufacturing process involving cutting and sewing of fabric material. As also set forth in the specification, for example beginning at page 1, line 22, bleaching of such non-finished textile components is desirable in order to destroy naturally occurring color bodies. This bleaching provides a uniform white appearance for consumer-acceptable whites and/or a uniform color base for subsequent dyeing or printing of the components.

While conventional bleaching and durable press treatments often cause textile components to exhibit significantly reduced strength, the present method employs an aqueous hydrophobic bleaching solution comprising hydrogen peroxide and a hydrophobic bleach activator or hydrophobic peracid in order to obtain sufficient bleaching without the conventionally-incurred strength reduction. Thus, the bleaching step, designed to destroy naturally occurring color bodies, can be followed by a durable press finish to provide a bleached, durable press fabric having better strength properties. In the method of claim 4, the durable press step is provided by treating the textile with an aqueous solution of formaldehyde, a crosslinking catalyst and an effective amount of a silicone elastomer forming material to further minimize strength reduction in the fabric product.

B. Claims 1 and 4-25 are Nonobvious Over Willey et al and Payet

The methods defined by claims 1 and 4-25 are nonobvious over and patentably distinguishable from Willey et al in view of Payet.

1. The Rejection

The Examiner asserts that Willey et al teach laundry detergent compositions containing bleaching systems with bleach activators, an example of which comprises 15% sodium percarbonate and 5% nonanoyl caprolactam with benzoxazin activator. The Examiner asserts that Payet teaches a process for imparting durable press to fabrics using formaldehyde, a catalyst and a silicone elastomer. The Examiner concluded that it would

have been obvious to both bleach and provide durable press to a fabric using the bleaching and durable press systems of the cited references.

2. The Claimed Methods are Nonobvious

In contrast to the presently claimed methods and products thereof which employ a non-finished textile component for bleaching, Willey et al relate to bleaching and/or laundering of finished textile components rather than non-finished textile components. For example, Willey et al disclose that their invention "relates to laundry detergents and methods which employ one or more types of deterative enzymes and a bleaching system" (page 1, lines 10-12). Further, Willey et al disclose detergent compositions for surface cleaning of fabrics to remove stains and/or soils from the fabrics and bleaching systems for removing most types of soils from fabrics, including protein and lipid soils, dingy soils and heavy soil loads, especially from nucleophilic and body soils (page 7, lines 17-22). Appellants find no teaching or suggestion by Willey et al relating to any method or product employing a non-finished textile component.

The Examiner has asserted that one of ordinary skill in the art would not make a distinction between stain removal from finished or non-finished textiles. Appellants respectfully disagree. As discussed in the background portion of the present application, a common pretreatment step for natural fibers and textiles thereof is a bleaching step to destroy naturally occurring color bodies in the fibers and textiles. One of ordinary skill will appreciate that this bleaching treatment is not directed to a soil or stain which has been deposited on a consumer fabric, to which laundry detergents as disclosed in the cited references are directed, and which are often provided with some form of soil or stain repelling treatment during finishing, but, rather, to color bodies which are inherent to the fibers or textiles and which in the past have required severe bleaching conditions to provide

acceptable whiteness or a uniform color base for subsequent dyeing, often resulting in textile damage.

Moreover, the Willey et al reference relates to bleaching and/or laundering of finished textile components, namely garments, and Appellants find no teaching or suggestion in this reference relating to any method, product or substrate employing a non-finished textile component. Thus, not only would one of ordinary skill in the art make a distinction between stain removal from finished or non-finished textiles, Willey et al do not teach a treatment method for non-finished textiles.

Finally, the Examiner asserted that the bleaching compositions of Willey et al would inherently be as effective on non-finished textiles as on finished textiles. Appellants submit that this conclusion is irrelevant to the issue of patentability since, as noted above, the reference fails to teach or suggest any method, product or substrate employing a non-finished textile component.

The deficiencies of Willey et al are not resolved by Payet. That is, Payet discloses a durable press/wrinkle-free process which comprises treating a cellulosic fiber-containing fabric with formaldehyde, a catalyst capable of catalyzing the crosslinking reaction between the formaldehyde and cellulose, and silicone elastomer, and heat-curing the treated cellulose-containing fabric. However, Appellants find no teaching or suggestion by Payet relating to a method for treatment of a non-finished textile component comprising, inter alia, saturating a non-finished textile component with an aqueous hydrophobic bleaching solution comprising hydrogen peroxide and a hydrophobic bleach activator or hydrophobic peracid. Similarly, Appellants find no teaching or suggestion by Payet that such a method will provide necessary bleaching without the significant strength reduction encountered in prior art bleaching methods. Finally, Appellants find no teaching or suggestion by Payet for combining the durable press process of Payet with a bleaching step employing an aqueous hydrophobic

bleaching solution and a hydrophobic bleach activator or hydrophobic peracid as presently claimed.

In order to render a claimed invention obvious, the prior art must enable one skilled in the art to make and use the claimed invention, *Motorola, Inc. v. Interdigital Tech. Corp.*, 43 U.S.P.Q.2d 1481, 1489 (Fed. Cir. 1997). In view of the failure of Willey et al and Payet to teach a method for treatment of a non-finished textile component including, inter alia, saturating a non-finished textile component with an aqueous hydrophobic bleaching solution comprising hydrogen peroxide and a hydrophobic bleach activator or hydrophobic peracid, particularly in combination with the remaining steps of claim 1, the combination of Willey et al and Payet does not enable one skilled in the art to make and use the claimed invention. Thus, the cited combination of references does not render the present invention obvious. The methods and products defined by claims 1 and 4-25 are therefore nonobvious over and patentably distinguishable from Willey et al in view of Payet, and the rejection under 35 U.S.C. §103 should be reversed.

3. Claim 13 is Further Patentably Distinguishable

Claim 13 recites that in the method of claim 10, the bleaching solution is at a temperature of from about 50 to about 80 °C and said textile component remains in contact with said bleaching solution for from about 30 to about 60 minutes.

Appellants find no teaching or suggestion of such methods by Willey et al. Rather, the exemplary teachings of Willey et al employ laundering at 35°C for 12 minutes (page 23, line 3) and at 40°C for 40 minutes (page 24, line 4). Additionally, Appellants find no teaching or suggestion that such treatment temperatures and times as recited in claim 13 are sufficient for providing bleaching of a non-finished textile component. Moreover, Appellants find no teaching by Payet relating to such bleaching temperatures and times. In view of the failure of Willey et al and Payet to teach or suggest these limitations, the cited combination of

references does not render the method of claim 13 obvious. Accordingly, the rejection under 35 U.S.C. §103 should be reversed.

4. Claim 14 is Further Patentably Distinguishable

According to claim 14, the bleaching solution of claim 1 further comprises from about 0.5 to about 20 g/L of sodium hydroxide.

Appellants find no teaching by Willey et al of a method employing sodium hydroxide, particularly in an amount as required by claim 14. Moreover, Appellants find no teaching by Payet relating to such a bleaching solution. In view of the failure of Willey et al and Payet to teach or suggest this limitation, the cited combination of references does not render the method of claim 14 obvious. Accordingly, the rejection under 35 U.S.C. §103 should be reversed.

5. Claims 16 and 17 are Further Patentably Distinguishable

According to claim 16, the textile component in claim 1 experiences a fabric strength reduction of less than about 10% during said method. According to claim 17, the treated textile component of claim 14 experiences a fluidity increase of less than about 25%.

Appellants find no teaching by Willey et al of a non-finished textile bleaching method providing a fabric strength reduction of less than 10%, as required by claim 16, or a fluidity increase of less than about 25%, as required by claim 17. To the contrary, typical bleaching methods for non-finished textiles employing hydrogen peroxide result in significant fabric strength reductions and fiber degradations. Conventional non-finished textile bleaching processes typically sacrifice fabric strength for whiteness or whiteness for fabric strength. Moreover, Appellants find no teaching by Payet for minimizing fabric damage during a bleaching process. In view of the failure of Willey et al and Payet to teach or suggest these limitations, the cited combination of references does not render the methods of claims 16 and 17 obvious. Accordingly, the rejection under 35 U.S.C. §103 should be reversed.

6. Claims 18-20 are Further Patentably Distinguishable

Claim 18 recites the further step of de-sizing said non-finished textile component prior to contact with said bleaching solution in the method of claim 1. Claim 19 recites the step of scouring said non-finished textile component prior to contact with said bleaching solution in the method of claim 1. Claim 20 recites the further step of de-sizing said non-finished textile component prior to contact with said bleaching solution in the method of claim 19.

Appellants find no teaching or suggestion by Willey et al of a method wherein de-sizing as required by claims 18 and 20 is conducted or wherein scouring as required by claim 19 is conducted. The lack of any teaching or suggestion of such steps by Willey et al emphasizes the failure of Willey et al to relate to any method for treating a non-finished textile component. Moreover, Appellants find no teaching by Payet for resolving the deficiencies of Willey et al, and particularly for suggesting a combination of the laundering process of Willey et al with either a de-sizing step and/or a scouring step. In view of the failure of Willey et al and Payet to teach or suggest these limitations, the cited combination of references does not render the methods of claims 18-20 obvious. Accordingly, the rejection under 35 U.S.C. §103 should be reversed.

C. Claims 1-3, 5-21 and 24 are Nonobvious Over Willey et al and Wright

The methods defined by claims 1-3, 5-21 and 24 are nonobvious over and patentably distinguishable from Willey et al in view of Wright.

1. The Rejection

The Examiner again relies on Willey et al as teaching laundry detergent compositions containing bleaching systems with bleach activators, and the Examiner relies on Wright as teaching a process for imparting wrinkle resistance to fabrics by contacting a fabric with dimethylol-4,5-dihydroxyethylene urea. The Examiner asserted that it would have been

obvious to use the bleaching and durable press systems of the cited references in combination.

2. The Claimed Methods are Nonobvious

As discussed in detail above, in contrast to the presently claimed methods and products thereof which employ a non-finished textile component for bleaching, Willey et al relate to bleaching and/or laundering of finished textile components rather than non-finished textile components. As noted, Willey et al disclose that their invention "relates to laundry detergents and methods which employ one or more types of deterative enzymes and a bleaching system" (page 1, lines 10-12). Further, Willey et al disclose detergent compositions for surface cleaning of fabrics to remove stains and/or soils from the fabrics and bleaching systems for removing most types of soils from fabrics, including protein and lipid soils, dingy soils and heavy soil loads, especially from nucleophilic and body soils (page 7, lines 17-22). Appellants find no teaching or suggestion by Willey et al relating to any method or product employing a non-finished textile component.

The Examiner again has asserted that one of ordinary skill in the art would not make a distinction between stain removal from finished or non-finished textiles. Appellants respectfully disagree. As noted above and as discussed in the background portion of the present application, a common pretreatment step for natural fibers and textiles thereof is a bleaching step to destroy naturally occurring color bodies in the fibers and textiles. One of ordinary skill will appreciate that this bleaching treatment is not directed to a soil or stain which has been deposited on a consumer fabric, but, rather, to color bodies which are inherent to the fibers or textiles and which in the past have required severe bleaching conditions to provide acceptable whiteness or a uniform color base for subsequent dyeing, often resulting in textile damage.

Moreover, the Willey et al reference relates to bleaching and/or laundering of finished textile components, namely garments, and Appellants find no teaching or suggestion in this reference relating to any method, product or substrate employing a non-finished textile component. Thus, not only would one of ordinary skill in the art make a distinction between stain removal from finished or non-finished textiles, Willey et al do not teach a treatment method for non-finished textiles.

Finally, the Examiner has again asserted that the bleaching compositions of Willey et al would inherently be as effective on non-finished textiles as on finished textiles. Appellants submit that this conclusion is irrelevant to the issue of patentability since, as noted above, the reference fails to teach or suggest any method, product or substrate employing a non-finished textile component.

The deficiencies of Willey et al are not resolved by Wright. Wright discloses cellulosic textiles dyed with a direct dye and characterized by a wrinkle-resistant finish comprising a cured composition which in the uncured state contained N,N'-dimethylol-4,5-dihydroxyethylene urea and a methylated melamine formaldehyde condensate. The composition is cured with an acid catalyst and heat. However, Appellants find no teaching or suggestion by Wright relating to methods for treatment of a non-finished textile component. To the contrary, the processes of Wright are directed to treatment of dyed fabric (column 3, lines 12-15). thus, the combination of Willey et al and Wright teaches away from the present methods employing a non-finished textile component.

In view of the failure of Willey et al and Wright to teach a method for treatment of a non-finished textile component including, inter alia, saturating a non-finished textile component with an aqueous hydrophobic bleaching solution comprising hydrogen peroxide and a hydrophobic bleach activator or hydrophobic peracid, particularly in combination with the remaining steps of claim 1, the combination of Willey et al and Wright does not enable

one skilled in the art to make and use the claimed invention. Thus, the cited combination of references does not render the present invention obvious, *Motorola, Inc. v. Interdigital Tech. Corp.*, 43 U.S.P.Q.2d 1481, 1489 (Fed. Cir. 1997). The methods and products defined by claims 1-3, 5-21 and 24 are therefore nonobvious over and patentably distinguishable from Willey et al in view of Wright, and the rejection under 35 U.S.C. §103 should be reversed.

3. Claim 13 is Further Patentably Distinguishable

Claim 13 recites that in the method of claim 10, the bleaching solution is at a temperature of from about 50 to about 80 °C and said textile component remains in contact with said bleaching solution for from about 30 to about 60 minutes.

Appellants find no teaching or suggestion of such methods by Willey et al. Rather, as noted, the exemplary teachings of Willey et al employ laundering at 35°C for 12 minutes (page 23, line 3) and at 40°C for 40 minutes (page 24, line 4). Additionally, Appellants find no teaching or suggestion that such treatment temperatures and times as recited in claim 13 are sufficient for providing bleaching of a non-finished textile component. Moreover, Appellants find no teaching by Wright relating to such bleaching temperatures and times. In view of the failure of Willey et al and Wright to teach or suggest these limitations, the cited combination of references does not render the method of claim 13 obvious. Accordingly, the rejection under 35 U.S.C. §103 should be reversed.

4. Claim 14 is Further Patentably Distinguishable

According to claim 14, the bleaching solution of claim 1 further comprises from about 0.5 to about 20 g/L of sodium hydroxide.

Appellants find no teaching by Willey et al of a method employing sodium hydroxide, particularly in an amount as required by claim 14. Moreover, Appellants find no teaching by Wright relating to such a bleaching solution. In view of the failure of Willey et al and Wright to teach or suggest this limitation, the cited combination of references does not render the

method of claim 14 obvious. Accordingly, the rejection under 35 U.S.C. §103 should be reversed.

5. Claims 16 and 17 are Further Patentably Distinguishable

According to claim 16, the textile component in claim 1 experiences a fabric strength reduction of less than about 10% during said method. According to claim 17, the treated textile component of claim 14 experiences a fluidity increase of less than about 25%.

Appellants find no teaching by Willey et al of a non-finished textile bleaching method providing a fabric strength reduction of less than 10%, as required by claim 16, or a fluidity increase of less than about 25%, as required by claim 17. To the contrary, typical bleaching methods for non-finished textiles employing hydrogen peroxide result in significant fabric strength reductions and fiber degradations. Conventional non-finished textile bleaching processes typically sacrifice fabric strength for whiteness or whiteness for fabric strength. Moreover, Appellants find no teaching by Wright for minimizing fabric damage during a bleaching process. In view of the failure of Willey et al and Wright to teach or suggest these limitations, the cited combination of references does not render the methods of claims 16 and 17 obvious. Accordingly, the rejection under 35 U.S.C. §103 should be reversed.

6. Claims 18-20 are Further Patentably Distinguishable

Claim 18 recites the further step of de-sizing said non-finished textile component prior to contact with said bleaching solution in the method of claim 1. Claim 19 recites the step of scouring said non-finished textile component prior to contact with said bleaching solution in the method of claim 1. Claim 20 recites the further step of de-sizing said non-finished textile component prior to contact with said bleaching solution in the method of claim 19.

Appellants find no teaching or suggestion by Willey et al of a method wherein de-sizing as required by claims 18 and 20 is conducted or wherein scouring as required by claim

19 is conducted. The lack of any teaching or suggestion of such steps by Willey et al emphasizes the failure of Willey et al to relate to any method for treating a non-finished textile component. Moreover, Appellants find no teaching by Wright for resolving the deficiencies of Willey et al, and particularly for suggesting a combination of the laundering process of Willey et al with either a de-sizing step and/or a scouring step. In view of the failure of Willey et al and Wright to teach or suggest these limitations, the cited combination of references does not render the methods of claims 18-20 obvious. Accordingly, the rejection under 35 U.S.C. §103 should be reversed.

IV. CONCLUSIONS

For the reasons discussed in detail herein, the methods defined by claims 1-25 are nonobvious over Willey et al in view of either Payet or Wright. Accordingly, the rejections under 35 U.S.C. §103 should be reversed. Favorable action by the Board is respectfully requested.

Respectfully submitted,



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APPENDIX

1. A method for the treatment of a non-finished textile component comprising the steps of providing a non-finished textile component, saturating said textile component with an aqueous hydrophobic bleaching solution comprising hydrogen peroxide and a hydrophobic bleach activator or hydrophobic peracid, and allowing said bleaching solution to remain in contact with said textile component for a period of time sufficient to bleach said textile component followed by finishing said textile component to provide durable press to said textile component.

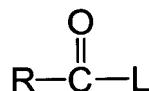
2. The method as claimed in Claim 1 wherein said step of providing durable press comprises treating the textile with a urea based crosslinking agent.

3. The method as claimed in Claim 2 wherein said urea based crosslinking agent is 1,3 dimethylol-4,5 dihydroxyethylene urea.

4. The method as claimed in Claim 1 wherein said step of providing durable press comprises treating the textile with an aqueous solution of formaldehyde, a catalyst capable of catalyzing a cross linking reaction with the textile and an effective amount of a silicone elastomer forming material, and curing said treated textile to provide durable press to said textile component.

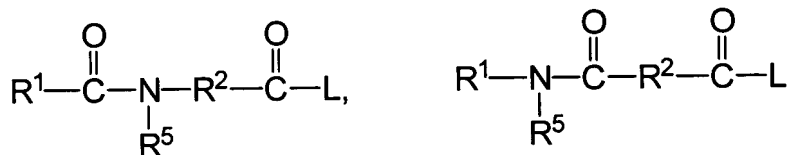
5. The method as claimed in Claim 1 wherein said bleaching solution comprises hydrogen peroxide and a hydrophobic bleach activator selected from the group consisting of:

a) a bleach activator of the general formula:



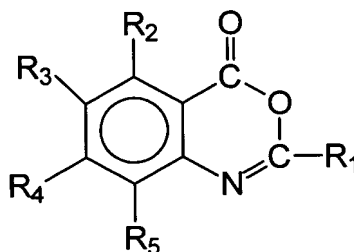
wherein R is an alkyl chain having from about 6 to about 18 carbon atoms and L is a leaving group;

b) a bleach activator of the general formula:



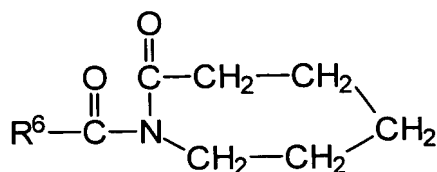
or mixtures thereof, wherein R¹ is an alkyl, aryl, or alkaryl group containing from about 1 to about 14 carbon atoms, R² is an alkylene, arylene or alkarylene group containing from about 1 to about 14 carbon atoms, R⁵ is H or an alkyl, aryl, or alkaryl group containing from about 1 to about 10 carbon atoms, and L is a leaving group;

c) a benzoxazin-type bleach activator of the formula:



wherein R₁ is H, alkyl, alkaryl, aryl, or arylalkyl, and wherein R₂, R₃, R₄, and R₅ may be the same or different substituents selected from the group consisting of H, halogen, alkyl, alkenyl, aryl, hydroxyl, alkoxy, amino, alkylamino, -COOR₆, wherein R₆ is H or an alkyl group, and carbonyl;

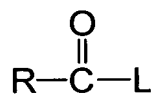
d) a N-acyl caprolactam bleach activator of the formula:



wherein R⁶ is H or an alkyl, aryl, alkoxyaryl, or alkaryl group containing from 1 to 12 carbons; and

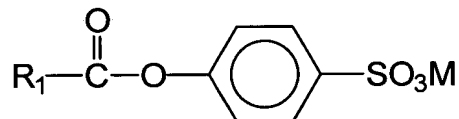
e) mixtures of a, b, c and d.

6. The method as claimed in Claim 5 wherein said hydrophobic bleach activator is a bleach activator selected from the general formula:



wherein R is an alkyl chain having from about 7 to about 12 carbon atoms and L is a leaving group, the conjugate acid of which has a pKa from about 4 to about 13.

7. The method as claimed in Claim 6 wherein said bleach activator is an alkanoyloxybenzenesulfonate of the formula:



wherein R₁ is an alkyl group having from about 8 to about 11 carbon atoms and M is a suitable cation.

8. The method as claimed in Claim 1 wherein said bleaching solution further includes an ingredient selected from the group consisting of wetting agents, sequestering agents, stabilizing agents, desizing agents, scouring agents and mixtures thereof.

9. The method as claimed in Claim 5 wherein said bleaching solution contains from about 1 to about 20 g/L of hydrogen peroxide.

10. The method as claimed in Claim 5 wherein the molar ratio of hydrophobic bleach activator to hydrogen peroxide in said bleaching solution ranges from about 1:1 to about 1:50.

11. The method as claimed in Claim 1 wherein said textile component remains in contact with said bleaching solution for from about 15 to about 180 minutes.

12. The method as claimed in Claim 11 wherein said bleaching solution is at a temperature of from about 20 to about 90 °C.

13. The method as claimed in Claim 10 wherein said bleaching solutions is at a temperature of from about 50 to about 80 °C and said textile component remains in contact with said bleaching solution for from about 30 to about 60 minutes.

14. The method as claimed in Claim 1 wherein said bleaching solution further comprises from about 0.5 to about 20 g/L of sodium hydroxide.

15. The method as claimed in Claim 12 wherein the ratio of said bleaching solution to said textile component is from about 5:1 to about 100:1 in a batch process.

16. The method as claimed in Claim 1 wherein said textile component experiences a fabric strength reduction of less than about 10% during said method.

17. The method as claimed in Claim 14 wherein said treated textile component experiences a fluidity increase of less than about 25%.
18. The method as claimed in Claim 1 further comprising the step of de-sizing said non-finished textile component prior to contact with said bleaching solution.
19. The method as claimed in Claim 1 further comprising the step of scouring said non-finished textile component prior to contact with said bleaching solution.
20. The method as claimed in claim 19 further comprising the step of de-sizing and said non-finished textile component prior to contact with said bleaching solution.
21. The method as claimed in Claim 4 wherein said curing step is a heat curing and said heat curing is carried out at a temperature of from about 250°F to about 325°F.
22. The method as claimed in Claim 4 wherein said textile is immersed in said treatment solution to provide a pick up, on weight of fabric, of at least about 3% formaldehyde, at least about 1% catalyst and at least 1% silicone elastomer forming material.
23. The method as claimed in Claim 4 wherein said catalyst comprises magnesium chloride and citric acid.
24. A product produced by the process of Claim 1.
25. A product produced by the process of Claim 4.